

IN THE CLAIMS:

Please cancel claims 1 and 2 and amend claim 3 as follows.

1. (Cancelled)

2. (Cancelled)

3. (Currently Amended) ~~A program for computing finite impulse response (FIR) filter coefficients embodied on a computer readable medium, the program causing a computer to execute~~A finite impulse response (FIR) filter design apparatus using a computer, the computer executing the steps of:

determining every element of a single-dimension array B' using a filter order N of a universal maximally flat FIR filter which has a characteristic of maximizing the smoothness, a number of zeros K at $z=-1$, and a parameter d for a group delay at $z=1$, by changing in sequence an index j from 1 to $N-K$ in a recurrence formula $B'[j] = (-1) \times \{(2d)B'[j-1] + (j-1)B'[j-2]\} / (N - j + 1)$, the single-dimension array having $N+1$ elements $B'[j]$ where $0 \leq j \leq N$, in which an element $B'[0]$ thereof is initialized to 1 and all the elements thereof except the element $B'[0]$ are initialized to zero

wherein N is a positive integer ~~of a universal maximally flat FIR filter~~, K is an integer equal to or more than zero, d is a rational number, and N , K , and d are provided by inputs;

determining every element of a three-dimension array r by sequentially changing, in the order of indexes j, i, p , an index j from 0 to $N-p$, and an index i from 0 to p , an index p from 1 to N in a recurrence formula $r[p,i,j] = (r[p-1,i-1,j] - r[p-1,i-1,j+1]) / 2 + (r[p-1,i,j] + r[p-1,i,j+1]) / 2$, the three-dimension array r having $(N+1)^3$ elements $r[p,i,j]$ where $0 \leq p \leq N$, $0 \leq i \leq N$, $0 \leq j \leq N$, in which elements $r[0,0,j]$ thereof where $0 \leq j \leq N-K$ are initialized to elements of the single-dimension array $B'[j]$ where $0 \leq j \leq N-K$, and all the elements thereof except the elements $r[0,0,j]$ are initialized to zero; and

extracting elements $r[N,i,0]$ of the three-dimension array r where $0 \leq i \leq N$ as the impulse response coefficients of the universal maximally flat FIR filter.